

IMPROVE

Rooting, Plant Establishment and Growth of Cuttings

Two new products treat cuttings of hard-to-root and slow-growing plants.

BY JIM SCRUGGS

As growers move each year to streamline their production systems, more are propagating their own cuttings. This can help reduce their costs and ensure timely availability of cuttings. There are two significant steps to successfully produce the cuttings. The first step is successful establishment of roots, and the second step is growth of the young plant through transplanting and plant establishment.

Different species and cultivars present different challenges. Some cultivars or species are more difficult to initiate rooting, and others may initiate rooting more easily but may be slow to continue growth. The new Pronto Rapid System addresses both areas.

The application of rooting hormones to plant cuttings has been part of propagation practices for years. However, the issue of having to manually dip each cutting into rooting hormone increases sticking time and costs (especially labor) associated with sticking. A new product (Advocate by Fine Americas) provides growers the ability to spray rooting hormone over the cuttings *after* sticking. This streamlines the sticking process in the production of annuals and perennials.

Advocate is a liquid formulation of IBA (indole-3-butyric acid) that mixes readily in water and can be sprayed/sprenched over the cuttings within 48 hours of sticking. IBA formulations in the past were either dry talc-based forms or gels that had to be applied by dipping the cuttings into the product. Some dry/powder IBA products can be diluted in water for spraying, but this product is a liquid that mixes well in water and does not create issues with spraying/sprenching over the cuttings. While Advocate can be used in a system using immersion, basal dip or basal emersion of cuttings, it is the ability to spray/sprench this product over the cuttings that provides an advantage.

To address the second potential hurdle of transplant production, another new product (Crest by Fine Americas) combines three PGRs to help the newly rooted plants grow to the desired size and stage. It does not create uncontrolled growth but acts to push the plant along in a controlled pace. Crest consists of three PGRs (IBA, Kinetin, GA) in ratios that promote structured plant growth. It can be applied as part of a watering program or as foliar sprays/sprenches.



Figure 1. Photo taken one week after third Crest application (five weeks after transplanting from liners). Crest treated plants in left tray.



Figure 2. Photo taken 16 weeks after third Crest application (20 weeks after transplanting from liners). Crest treated plants in left tray.

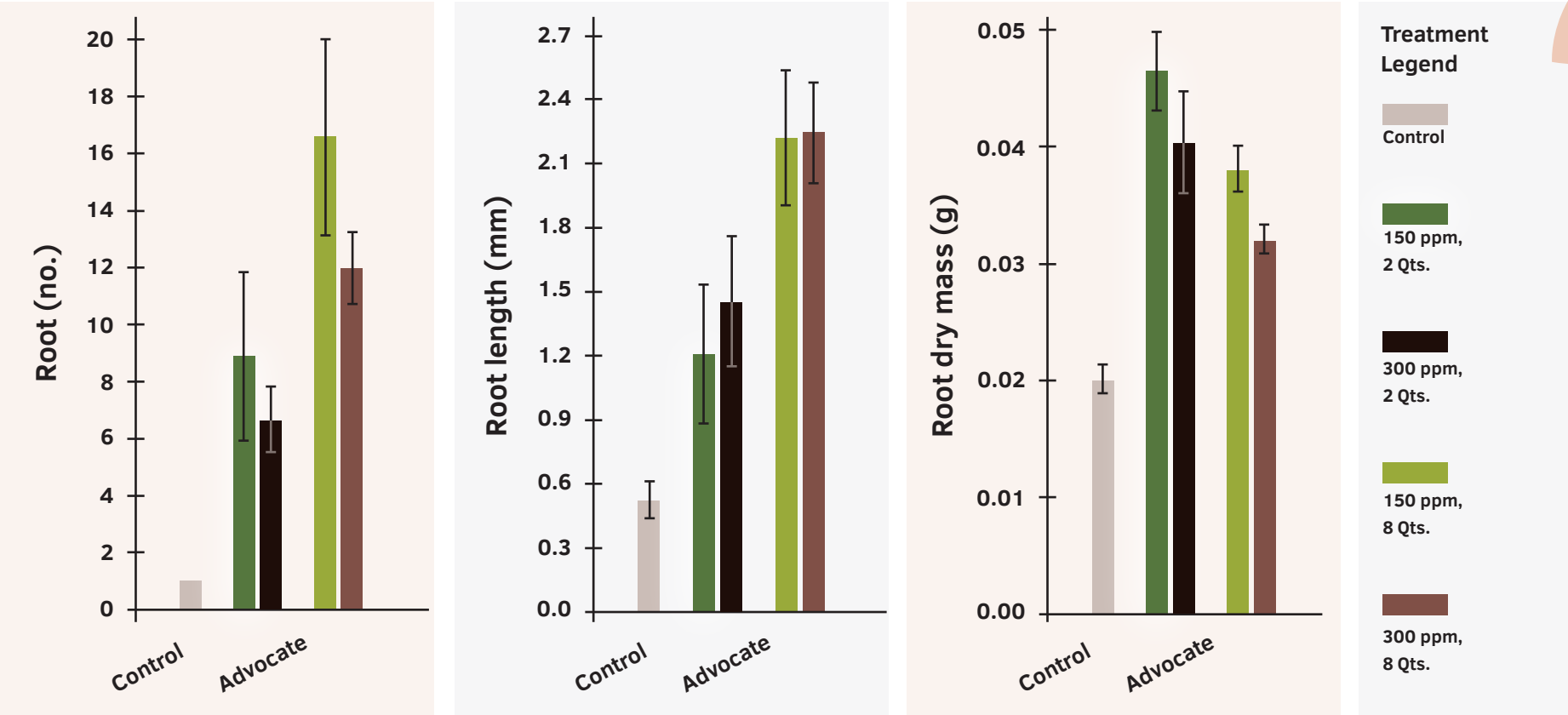


Figure 3. Rooting data for scaevola 'Blue Fan' cuttings treated with Advocate.

ROOTING HORMONE RESULTS

Advocate has been tested across a variety of annual and perennial species. The formulation has good crop safety when used as directed on the label. We do not recommend using rates higher than those stated on the product label as injury may occur resulting in less than desirable effects. Before using Advocate on any species, variety or cultivar that the

grower does not have experience with, rates should be tested on a small group of plants before applying the product to a larger group of plants.

Efficacy testing has been done through several leading universities for evaluation of rooting in cuttings treated with Advocate. Data graphs above indicate significant increases in root number, root length and root dry mass

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for scaevola 'Blue Fan' cuttings six days after the cuttings were sprayed. Cuttings were treated with two rates of Advocate at two different spray volumes one day after cuttings were stuck.

In the data shown in Figure 3 (page 28), note that increasing the spray volume for the applications can increase the effect of the IBA. This has been seen across research trials where multiple spray volumes were applied. On average, two to four quarts/100 ft² bench space

will be sufficient to treat freshly stuck cuttings, but higher volumes may be used depending on the production system for each grower. It is recommended that users test rates and spray volumes in their production systems on a small number of plants before applying

to a larger number of plants.

When propagating harder-to-root woody perennial species, and depending on climatic conditions at the time of rooting, one to two additional applications of Advocate may be required to achieve desired rooting.

FOLLOW-UP APPLICATIONS

Applications of Crest can be made to the plants once rooting is established. This can be helpful with plants that are slower to start and/or when conditions favor slower growth.

Figures 1 and 2 (page 28) are from a grower trial conducted in 2020 on abelia 'Kaleidoscope'. Abelia cuttings were sprayed at the time of sticking with Advocate at 1,000 ppm and again at 1,000 ppm 10 days later. Once rooting was established, three spranches of Crest at 1.0 fl.oz./gal. were applied to the abelia at two-week intervals. In the pictures, the plants in both trays were rooted using Advocate prior to transplanting, but the tray on the left in each picture received the three applications of Crest.

These photos illustrate one particular production scheme for the woody perennial (abelia). The number of applications for both Advocate and Crest will vary by crop, growing conditions and the production plan employed by the grower.

These new products provide growers new options for plant propagation from sticking of cuttings through plant establishment in the final growing pot or tray. The flexibility in this system is that each product can be used alone to target the needs of the grower or can be used in tandem as the Pronto Rapid System for establishment and growth of propagated plants.

Go to www.fine-americas.com for labels, technical sheets and other information that provide directions, application techniques, rates to be applied and application volumes for both Advocate and Crest. *gpn*

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